

U.S. Department of Energy
Office of River Protection
Mr. R. J. Schepens
Manager
P.O. Box 450, MSIN H6-60
Richland, Washington 99352

CCN: 047332

Dear Mr. Schepens:

**CONTRACT NO. DE-AC27-01RV14136 – TRANSMITTAL FOR INFORMATION –
AUTHORIZATION BASIS CHANGE NOTICE 24590-WTP-ABCN-ENS-02-016,
REVISION 0, REAGENT SUPPLY SYSTEM DESIGN UPDATE**

Bechtel National, Inc. (BNI) is submitting Authorization Basis Change Notice (ABCN) 24590-WTP-ABCN-ENS-02-016, Revision 0, to the U.S. Department of Energy, Office of River Protection and the Office of Safety Regulation (OSR) for information. This contractor-approved ABCN incorporates the move of the reagent room from the -21'-0" elevation and removing the stainless steel liner from the bermed area and replacing it with an chemical resistant epoxy paint.

An electronic copy of ABCN 24590-WTP-ABCN-ESH-02-016, Revision 0, is provided for the OSR's information and use.

Please contact Mr. Bill Spezialetti at (509) 371-5778 for any questions or comments.

Very truly yours,

R. F. Naventi
Project Director

TR/slr

Attachment: Authorization Basis Change Notice 24590-WTP-ABCN-ENS-02-016, Revision 0



Authorization Basis Change Notice

Page 2 of 4

ABCN Number 24590-WTP-ABCN-ENS-02-016 Revision 0

ABCN Title Reagent Supply System Design Update

II. Description of the Proposed Change to the Authorization Basis

D. Affected Authorization Basis and Implementing Documents (drawings, procedures, plans, etc):

Title	Document Number	Revision
HLW Vitrification Building General Arrangement Plan at EL. -21'-0"	24590-HLW-P1-P01T-00001	1
HLW Vitrification Building General Arrangement Plan at EL. 11'-0"	24590-HLW-P1-P01T-00003	0
HLW Vitrification Building General Arrangement Section G-G and H-H	24590-HLW-P1-P01T-00010	4
Process Flow Diagram HLW Vitrification Reagents (System NAR, SHR, AMR, and DIW)	24590-HLW-M5-V17T-00008	3
P&ID-HLW Sodium Hydroxide Reagent System Sodium Hydroxide Supply	24590-HLW-M6-SHR-00001	C
P&ID-HLW Demineralized Water System Demineralized Water Distribution	24590-HLW-M6-DIW-00001	C
P&ID-HLW Nitric Acid System Nitric Acid Supply	24590-HLW-M6-NAR-00001	0
Preliminary Safety Analysis Report To Support Partial Construction: HLW Facility Specific Information	24590-WTP-PSAR-ESH-01-001-04	0
Preliminary Safety Analysis Report To Support Construction: HLW Facility Specific Information	24590-WTP-PSAR-ESH-01-002-04	0

E. Describe the proposed changes to the Authorization Basis documents. Include specific references to the AB documents and design documents that are to be changed:

Section 2.4.11.14 of documents 24590-WTP-PSAR-ESH-01-001-04 and 24590-WTP-PSAR-ESH-01-002-04 currently describes the reagent tank room (H-B052) at the -21 ft elevation, this room has been relocated to the 11 ft elevation directly above its old position in the SW corner of the building. The majority of the tank instrumentation listed in this section is no longer required. We currently only require a level instrument in each reagent tank. The new reagent room (H-0214) bermed area is not lined with stainless steel as stated in this section, but instead chemical resistant epoxy paint will be applied to the concrete.

Table 3-3 of documents 24590-WTP-PSAR-ESH-01-001-04 and 24590-WTP-PSAR-ESH-01-002-04 currently list the old BNFL style tank numbers, these numbers have been updated to the BNI RPP-WTP project format. Nitric tanks T36001 and T36004 are now NAR-TK-00001 and NAR-TK-00002, respectively.

Figures 2-1 and 2-4 in 24590-WTP-PSAR-ESH-01-001-04 and figures 2A-1, 2A-3, and 2A-9 in 24590-WTP-PSAR-ESH-01-002-04 show the General Arrangement drawings and sectionals with the reagent room in the -21 ft elevation. Although these figures are marked for "illustration purposes only" they are not consistent with the design of the reagent room at the 11 ft elevation.

Figure 2A-40 in 24590-WTP-PSAR-ESH-01-002-04 also shows an old revision of the PFD. Although this figure is also marked for "illustration purposes only" it is not consistent with the current design.



Authorization Basis Change Notice

Page 3 of 4

ABCN Number 24590-WTP-ABCN-ENS-02-016 Revision 0

ABCN Title Reagent Supply System Design Update

Appendix B.4.1.2 in 24590-WTP-PSAR-ESH-01-002-04 describes the reagent room as a C5 area that is entirely below grade. This room has been moved to the 11 ft elevation and will therefore be removed from this section.

F. Explain why the change is needed:

Preliminary Safety Analysis Report to Support Partial Construction Authorization, Section 2.4.11.14, Reagent Tank Room (H-B052) describes the reagent tank room at the –21 ft level. This room was moved up to the 11 ft level per DCA 24590-HLW-DCA-PL-02-001, *Relocation of the Reagents Room – Room #H-B052*.

The instrumentation listed is no longer required in the tanks per DCN 24590-HLW-DCN-PR-02-010, *Delete Temperature, Conductivity, and Pressure Indication for tanks*. We currently only require a level instrument in each reagent tank.

The bermed area is not lined with steel but instead a chemical resistant paint applied to the concrete as described in 24590-HLW-FD-PR-01-001, HLW Vitrification Facility Sump and Liner Characterization Document (Below Grade).

Preliminary Safety Analysis Report to Support Partial Construction Authorization, Table 3-3, HLW Process and By-product Chemicals and Inventories lists the old BNFL style tank numbers, these numbers have been updated to the BNI RPP-WTP project format.

III. Summary of Safety Evaluation

G. DOE approval of this AB change is not required because the Safety Evaluation has determined that the change meets all the criteria for Contractor approval of the change.

Summarize the results of the Safety Evaluation by checking the statements below for Administrative Control changes OR Facility changes, not both. Add clarifying remarks, as necessary, to provide complete and accurate information.

Safety Evaluation No. 24590-WTP-SE-ENS-02-028 Rev 0

☐ For an Administrative Control:

This administrative control change does not affect the SRD. The change falls beneath the level of detail described in the Code of Federal Regulations applicable to the project (10 CFR 820, 10 CFR 830, and 10 CFR 835). The change conforms to the requirements in the top-level safety standards (e.g., DOE/RL-96-0006). The change provides adequate safety because the applicable questions on the Safety Evaluation have been answered in a way that ensures adequate safety following the change. The change conforms to contract requirements and will not result in inconsistencies with other AB or authorization agreement commitments or descriptions.

Remarks:



Authorization Basis Change Notice

Page 4 of 4

ABCN Number 24590-WTP-ABCN-ENS-02-016 Revision 0

ABCN Title Reagent Supply System Design Update

☒ For a Facility Control:

This facility change does not affect the SRD. The change does not create a new DBE or increase the frequency or consequence of an analyzed DBE. The change does not result in a decrease in the safety function of an ITS SSC or change how an SDC SSC meets its respective safety function. The change falls beneath the level of detail described in the Code of Federal Regulations applicable to the project (10 CFR 820, 10 CFR 830, and 10 CFR 835). The change conforms to the requirements in the top-level safety standards (e.g., DOE/RL-96-0006). The change provides adequate safety because the applicable questions on the Safety Evaluation have been answered in a way that ensures adequate safety following the change. The change conforms to contract requirements and will not result in inconsistencies with other AB or authorization agreement commitments or descriptions.

Remarks:

All changes are within the intent of the AB documents. All changes are consistent with top level standards and do not result in non-conformance of the contract requirements.

H. Attachments (if any):